

Applicant : Haim B. Gunner et al.  
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Filed : June 23, 2003  
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Attorney's Docket No.: 07880-121001 / UMA00-16A

### REMARKS

The Examiner rejected claims 1 and 3-5. Claim 1 has been amended herein to recite that the bacterial strain is designated APM-1, deposited as ATCC Accession No. PTA-4838. Support for this amendment can be found throughout Applicants' specification and in former claim 2, which has been canceled without prejudice. New claims 21-24 have been added. Claim 21 recites that the bacterial strain of claim 1 exhibits degradative activity towards a toxin selected from the group consisting of polyaromatic hydrocarbons, benzo[a]pyrene, chlorinated aliphatic solvents, mineral oils, petroleum fuel hydrocarbons, aliphatic hydrocarbons, alicyclic hydrocarbons, polychlorinated biphenyls, aromatic hydrocarbons, alcohols, ethers, ketones, herbicides, insecticides, DDT, dieldrin, toxaphene, 1,1,1-trichloroethane, 1,1 dichloroethane, trans-1,2 dichloroethene, trichloroethylene, methylene chloride, toxaphene, dieldrin, lindane, aldrin, chlordane, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, endosulfan I, endosulfan II, and endosulfan sulfate. Support for claim 21 can be found in Applicants' specification at, for example, page 12, lines 19-28, which disclose that toxic compounds that can be degraded include those listed in claim 21. Claim 22 recites that the bacterial strain of claim 1 exhibits fungicidal or fungistatic activity when applied to a soil environment, and claim 23 recites that the bacterial strain exhibits fungicidal or fungistatic activity toward a fungal plant pathogen. Support for claims 22 and 23 can be found in, for example, the section of Applicants' specification extending from page 10, line 1 to page 11, line 12. This section discloses, *inter alia*, that compositions of the invention can be used to control or suppress fungal plant pathogens, and can be applied to a soil environment.

Claim 24 recites a biologically pure culture of a bacterial strain designated APM-1, deposited as ATCC Accession No. PTA-4838. Support for claim 24 can be found in Applicants' specification at, for example, page 3, lines 21-23, which disclose that the invention includes a biologically pure culture of a microorganism having the identifying characteristics of a Gram-positive bacterium designated APM-1, deposited as ATCC Accession No. PTA-4838.

Withdrawn claim 13 has been amended herein to depend from new claim 24, and claims 14 and

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15 have been canceled without prejudice. In addition, withdrawn claims 18 and 19 have been amended for consistency with claim 13. Thus, no new matter has been added.

In light of these amendments and the following remarks, Applicants respectfully request reconsideration and allowance of claims 1, 3-5, and 21-24, as well as rejoinder and allowance of claims 6-13 and 16-20.

Rejections under 35 U.S.C. § 102

The Examiner rejected claim 1 under 35 U.S.C. § 102(b) as being anticipated by the U.S. Patent No. 5,972,689 (the Cook *et al.* patent) or U.S. Patent No. 6,312,940 (the Schisler *et al.* patent). In response to Applicants' previous arguments, the Examiner stated that the presently claimed compositions are identical to the cited compositions no matter how they are used.

Applicants respectfully disagree. To expedite prosecution, however, Applicants have amended claim 1 to recite that the bacterial strain is designated APM-1, deposited as ATCC Accession No. PTA-4838. Neither the Cook *et al.* patent nor the Schisler *et al.* patent discloses making or using the bacterium designated APM-1 and deposited as ATCC Accession No. PTA-4838. Thus, these references do not anticipate present claim 1.

In light of the above, Applicants respectfully request withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(b).

The Examiner rejected claim 1 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,503,746 (the Daane *et al.* patent). The Examiner stated that the Daane *et al.* patent teaches about  $10^4$  to about  $10^9$  cfu per gram dry inert carrier of a bacterial strain that exhibits degradative activity toward selected toxins such as polyaromatic hydrocarbons. Thus, the Examiner stated that claim 1 is identical to the teaching of the Daane *et al.* patent.

Applicants respectfully disagree. As noted above, Applicants have amended claim 1 to recite that the bacterial strain is designated APM-1, deposited as ATCC Accession No. PTA-4838. The Daane *et al.* patent does not disclose making or using the bacterium designated APM-1. Thus, this reference does not anticipate present claim 1.

In light of the above, Applicants respectfully request withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(e).

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The Examiner rejected claims 1 and 3-5 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,863,789 (the Komatsu *et al.* patent). The Examiner stated that the Komatsu *et al.* patent teaches a bacterial strain having degradative toxin capability, wherein the bacterial strain is inoculated on a porous carrier. Thus, the Examiner concluded that the claims are identical to the subject matter disclosed in the Komatsu *et al.* patent.

Applicants respectfully disagree. Again, amended claim 1 recites that the bacterial strain is designated APM-1, deposited as ATCC Accession No. PTA-4838. The Komatsu *et al.* patent fails to disclose making or using the bacterium designated APM-1. Thus, this reference does not anticipate present claims 1 and 3-5.

In light of the above, Applicants respectfully request withdrawal of the rejection of claims 1 and 3-5 under 35 U.S.C. § 102(b).

#### Double patenting

The Examiner provisionally rejected claims 1-5 under 35 U.S.C. § 101 as claiming the same invention as that of claims 1-6 of copending Application No. 10/324,240. Applicants respectfully request that the Examiner hold this provisional rejection in abeyance, as Application No. 10/324,240 has not issued.

#### Rejections under 35 U.S.C. § 112

The Examiner rejected claim 2 under 35 U.S.C. § 112, first paragraph as containing subject matter that was not described in the specification in such a manner as to enable a person of skill in the art to make and/or use the invention. The Examiner stated that the microorganism recited in the claims must be obtainable by a repeatable method set forth in the specification or otherwise be readily available to the public, such as by a deposit of the microorganism.

As noted on page 3 of the pending application, Applicants deposited strain APM-1 in the American Type Culture Collection (ATCC) as ATCC Accession No. PTA-4838. Applicants have amended page 3 of the specification to indicate the date of deposit and the address of the ATCC. Applicants' agent also submits herewith a declaration stating that strain APM-1 will be irrevocably and without restriction or condition released to the public upon issuance of the patent. Thus, the deposit requirement is satisfied.

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In light of the above, Applicants respectfully request withdrawal of the rejection of claim 2 under 35 U.S.C. § 112, first paragraph for lack of enablement.

The Examiner rejected claims 1-5 under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. The Examiner stated that the recitation of "per gram dry inert carrier of a bacterial strain" is vague and indefinite since it is unclear whether the carrier is being combined with the bacterial strain or whether the strain itself is dried and intended to function as a carrier in and of itself. The Examiner also stated that claim 2 is vague and indefinite since it is uncertain whether all of the identifying characteristics are intended or just some of the identifying characteristics.

To expedite prosecution, Applicants have amended claim 1 as suggested by the Examiner. Specifically, claim 1 (which now includes the language of previous claim 2) has been amended to recite a composition comprising about  $10^3$  cfu to about  $10^{11}$  cfu of a bacterial strain per gram dry inert carrier, wherein the bacterial strain is designated APM-1, deposited as ATCC Accession No. PTA-4838. Thus, claim 1 is clear and definite.

In light of the above, Applicants respectfully request withdrawal of the rejection of claims 1 and 3-5 under 35 U.S.C. § 112, second paragraph.

Request for rejoinder of withdrawn claims

Claims 6-12 recite methods that depend, either directly or indirectly, from claim 1, which Applicants submit is in condition for allowance. Claims 13 and 16-20 recite methods that depend, either directly or indirectly, from claim 24, which Applicants submit is in condition for allowance. Thus, Applicants respectfully request rejoinder of withdrawn claims 6-13 and 16-20 with pending claims 1, 3-5, and 21-24.

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### CONCLUSION

Applicants submit that claims 1, 3-5 and 21-24 are in condition for allowance, which action is respectfully requested. In addition, Applicants respectfully request rejoinder and allowance of claims 6-13 and 16-20. The Examiner is invited to telephone the undersigned agent if such would further prosecution.

Please charge \$25 for excess claim fees, and apply any other charges or credits, to deposit account 06-1050.

Respectfully submitted,

Date: May 16, 2005

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